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The Files

20 September 1956

25X1A9A [redacted]

25X1A5A1 Trip Report to [redacted] and others

1. An initial visit was made to the [redacted] 25X1A5A1
25X1 [redacted], during the afternoon of 6 September 1956, in connec-
25X1 tion with [redacted] Task Order 1, for the development of the AS-3 Semi-automatic Agent Two-way Communications System. Present were:

25X1A [redacted]

2. The Task Order was accepted by the contractor on 29 June 1956 and the contractor is allowed 18 months from that date for the completion of the development activity and for shipment of the deliverable items. The contract cost is approximately $180,000. The contractor made no progress directed toward the execution of the Task Order during the months of July and August. One mechanical engineer was assigned to the project on 4 September 1956. The contractor's reasons for failure to initiate development activity were expressed as difficulties encountered in hiring qualified engineers for the work and some organizational disruption due to moving into a new engineering laboratory building. The company has yet to assign senior engineers to the project as well as additional full time electronic engineering personnel. A development schedule must be made for the various components of the AS-3. An initial bi-monthly progress report is due. The contractor was instructed to submit a report to the Contracting Officer in writing, advising of his company's ability to execute the in-
25X1A5A1 tent of the contract. [redacted] agreed to get such a report in the mail by next week.

25X1A5A1 3. [redacted] a former project engineer on the RS-11A receiver
25X1A5A1 with the [redacted] 25X1
25X1A5A1 This visit permitted a discussion with [redacted] on the feasability of providing a transistorized power supply for the RS-11 equipment. Mr. [redacted] has just completed the design of the 100 watt transistor power supply which the company plans to manufacture as a proprietary item with production set at 7000 units per year. The unit will replace a 28 volt dynamotor standard in aircraft. The specifications for the transistorized dynamotor replacement require operation from -40 to +80 degrees centigrade (174 degrees F). The efficiency, 93 per cent, is uncommonly high. [redacted] computed that a 25X1 transistorized power supply for the RS-11A/B (30 watts) to supply B voltages

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for the transmitter from a 12 volt source would require a volume of 10 cubic inches or about 1/3 the size of the present BA-1315/U. This inquirey was based on a rather general thought that eventually all communications equipment will be capable of being powered from a 12 volt storage battery or other 12 volt source (i.e., a thermo electric or solar generator).

4. A visit was made to the [redacted] during the morning of 7 September 1956 in connection with [redacted] Present were: [redacted]

5. [redacted] had advised earlier of an improved key click filter design (inspired by the laboratory) to reduce key click radiation. The undersigned delivered five transmitters for modification. [redacted] engineers demonstrated a "Before and After" modification radiation test, the results of which indicated a positive improvement. Acceptance tests will be made by the R&D Laboratory whose test methods are more rigorous. The five sets were modified and returned to the undersigned.

6. One each, RR-11A and RR-11B were returned to the contractor for an explanation of the output circuitry which differed from that indicated in the schematics. The contractor advised that the LAK4 in the output stage of the RR-11A was in error and should have been a LAD5. He also advised that the "A" schematic should show a 27K resistor in the grid of the BFO, and the "B" schematic should show a 270K resistor in the BFO grid. [redacted] advised that they had reduced the bias on the "A" receiver to eliminate spurious responses occuring at BFO harmonics. The company was advised that spurious response tests had not been made on the "B" receiver to date, and that it may also be necessary to make this same change on the "B" units. [redacted] was requested to hold these two receivers pending tests of other receivers.

7. [redacted] was to have calibrated an "A" and "B" receiver using the logging scale in lieu of the dial for frequency identification. A frequency tuning and resetability accuracy of 20 kc/s was anticipated. Receiver tuning would then be accomplished by reference to a chart of frequency versus logging scale graduations. The chart would be permanently attached to the receiver case. This method of receiver tuning is [redacted] attempt to meet equipment specifications for calibration and resetability accuracy in lieu of the dial scale which has been found unsatisfactory (thermal expansion of the Mylar tape). The receivers were not ready for delivery and the company requested two more days to complete the calibration. The equipment would then be sent down air express.

8. [redacted] expressed his regrets for the difficulties encountered with the RS-11A/B and said they would do everything possible to make the

units acceptable to us. The undersigned expressed the opinion that it did not seem practicable to calibrate each set in production for a 20 kc/s tuning accuracy necessitating the need for an individual chart for each receiver. [redacted] said he planned to average out calibration data from several receivers to determine if calibration accuracy requirements could be met with averaged figures for a single receiver chart.

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[redacted]

10. [redacted] was visited on 10 September 1956. This company was visited for the purpose of discussing the ET-2 electro-mechanical keyer. [redacted] does work for TSS and has a full contractual clearance. Present for a discussion of the ET-2 keyer were:

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[redacted]

11. The unit was demonstrated in a manner similar to that of the [redacted] This company also expressed a willingness to undertake a study of the equipment to see what might be done to improve its reliability. The undersigned agreed to provide [redacted] with an abstract copy of an evaluation report on the unit when available, and suggested that the company consider a three phase proposal to include a short study phase of approximately one month. The study phase should be included with recommendations for phase two improvement of the equipment to establish reliability without major modification and a phase three program calling for repackaging of the unit for brief-case dimensions. These similar suggestions were also made (paragraph 7 above) at the [redacted] on Friday. Following the equipment demonstration, the undersigned made a tour of the plant. The [redacted] specializes in the development and manufacture of training devices which incorporate slow speed electronic and mechanical analogue computers. The

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company was completing a shipment of 13 pilot trainers to the Air Force and has under development a sonar training device for training service personnel in identifying and tracking waterborn craft without going to sea. The company is also developing a training device for truck drivers.

25X1A5A1 [redacted] has had no experience with miniaturization techniques nor with transmitters. The efficiency of the plant and the quality of the work were impressive.

[redacted] 25X1A9A

OC-E/R&D-EP/CEM:wlm (20 September 1956)

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R&D Subject File
OC-O&T
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